

# The Prefabricated Website

Who needs a server anyway?

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# Quick summary

The projects: *Endings* and *The Map of Early Modern London*

What is a static site, and why would you build one?

The site build process

Advantages

Disadvantages



## /e Project *Endings*

*Endings* is a four-year project funded by the Social Sciences and Humanities Research Council (SSHRC) that is creating tools, principles, policies and recommendations for digital scholarship practitioners to create accessible, stable, long-lasting resources in the humanities.

Thank you SSHRC!



Social Sciences and Humanities  
Research Council of Canada

Conseil de recherches en  
sciences humaines du Canada

Canada

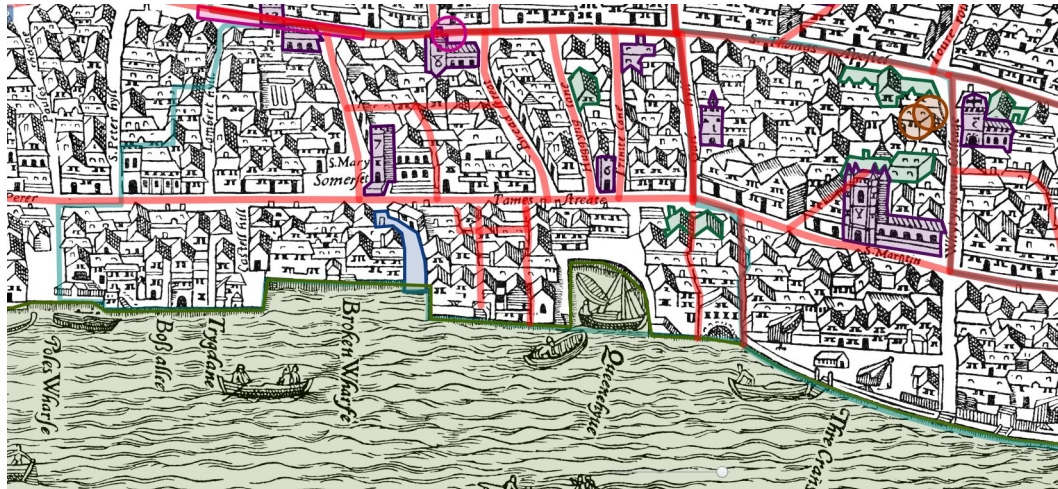




Currently version 6.3 / 6.4, versions dating back to 1999

2,000+ documents, 1,600+ locations, 6,500+ people, 1800+ bibliography items

# Gazetteer / encyclopedia / digital edition publication platform



# *Endings* principles

- Data
- Products
- Processing
- Documentation
- Release Management



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- Data
- **Products**
- **Processing**
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# Static sites: what and why?



[www.tei-c.org](http://www.tei-c.org), early 2019...

Hmm. We're having trouble finding that site.

We can't connect to the server at [www.tei-c.org](http://www.tei-c.org).



**If that address is correct, here are three other things you can try:**

- Try again later.
- Check your network connection.
- If you are connected but behind a firewall, check that Firefox has permission to access the Web.

Try Again





# Dependencies

The TEI site depends on WordPress

WordPress depends on PHP and MySQL (single point of failure)

Getting a new server running requires

- Installing PHP and MySQL
- Restoring the DB from backup
- Configuring WordPress
- ...



# No such problem with the Guidelines

The online version of the TEI Guidelines consists only of HTML, CSS and JavaScript.

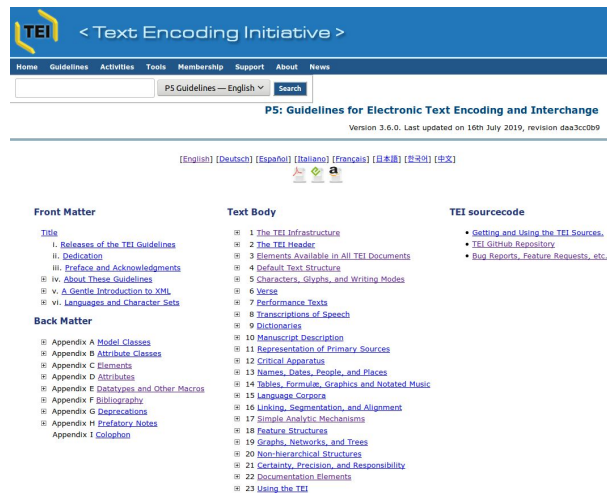
It's always in multiple places.

You can put a copy of it on any server.

You can use it from a local drive.

You can put as many copies as you like wherever you want.

That's a *static site*.



# Static sites:

Have no dependencies (other than a web server) ✓

Are pure HTML, CSS and JavaScript ✓

Can be replicated endlessly ✓

Need little or no curation ✓

Therefore have more chance of survival ✓



# We're not the only people who think so...

[Jamstack.org](https://jamstack.org) is an initiative to champion “modern web development architecture based on client-side JavaScript, reusable APIs, and prebuilt Markup,” in the interests of “better performance,” “cheaper, easier scaling,” “higher security,” and a “better developer experience.”



# MoEML's static site build process: Part 1

- Validate (Relax NG)
- Validate (Schematron)
- Diagnose
  - Coherence: all links point to things
  - Consistency: all documents conform to encoding and editorial guidelines
  - Completeness: everything mentioned actually exists.(See Holmes and Takeda 2019, <http://dx.doi.org/10.1093/lc/fqz011>)

*If anything is wrong, then stop. A Website with errors is not worth building.*



# In the bad old days before Endings...

...project members would happily upload anything they thought was finished into the live web application.

They linked to things that didn't yet exist or might never exist.

They added images and documents that were never linked to.

The site was always slightly broken in numerous ways.



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We'll have no more of that.



# MoEML's static site build process: Part 2

## *Make more XML!*

“Original” TEI: Better versions of our actual encoded files.

“Synthesized” TEI: New documents computed from existing pages.

“Standalone” TEI: Versions with no external dependencies.

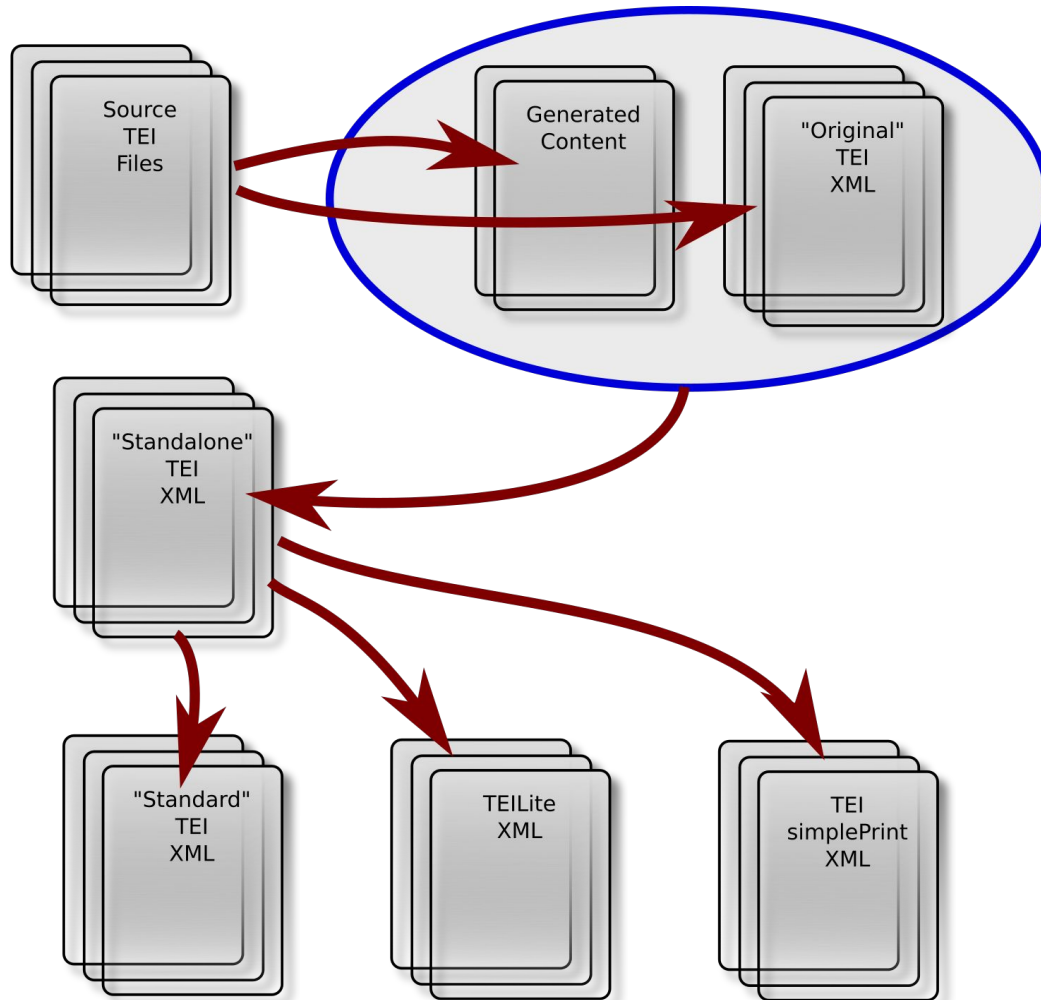
“Standard” TEI: Versions with less common encoding practices normalized.

TEI Lite and TEI simplePrint: Versions for simple interchange.

(See Holmes 2017, <http://dx.doi.org/10.1093/llc/fqw048>)







# MoEML's static site build process: Part 3

- Build the HTML, CSS and JavaScript.
- Validate all the HTML.
- Validate all the CSS.

If *anything* is wrong, then stop. *A Website with errors is not worth building.*



# Rules for Website generation

- **Every entity** (location, person, org, article etc.) **has a unique id**, and its own **unique page** on the site.
- **No URL is ever abandoned**. Obsoleted ids still get a page, redirecting as appropriate.
- **Every page stands alone and complete** in terms of content.
- **All pages live together in the same folder**.



“But but but ....”

*But massive duplication of  
content across the site!*

*But thousands of files  
no-one may ever see!*

*But 10,591 files all in the  
same folder!*

We don't care.

We don't care.

We don't care.



# Advantages: 1

You can build hugely complex resources that could not be built on the fly.

For example:

- the Gazetteer (9000 entries)
- the [A-Z Index](#) (a single page with 10,500 entity ids)

(Because Control + F.)



# Advantages: 2

You can do really complicated, multi-pass processing of gnarly markup.

For example: `@style`, `<rendition>/@selector`

- Collect all identical `@style` on elements into a `<rendition>`
- Convert all `<rendition>/@selectors` into XPath, then to `@rendition`
- Then generate HTML/CSS



# Advantages: 3

Archiving the site is easy:

```
cp -r site somewhere_else/
```

Replicating the site is easy:

```
cp -r site somewhere_else/
```



# Advantages: 4

Everything is there.

Internal links never break.

Everything works.

Everything is valid.

Everyone is happy.





# Disadvantages

Deferred gratification.

- Builds take a long time.
- Builds often fail.
- It can be hours before you can see your work on the build server.

But guess what?



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We don't care.  
Patience is a virtue.



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  - If the same personography entry is replicated in fifty pages that mention that person, then good; any of those pages can now be used outside the context of the collection without loss.



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- **Everything that could conceivably be useful should be created and included.**
- **Redundancy is beneficial; in fact it is elegant.**
  - If the same personography entry is replicated in fifty pages that mention that person, then good; any of those pages can now be used outside the context of the collection without loss.
- **Patience is a virtue: let your build take a long time; let your releases be well-separated.**



Thanks for listening!

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